I CLAIM:

1. A composition comprising:

at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds; and

at least one chemotherapeutic agent.

2. A composition as recited in claim 1, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

3. A composition as recited in claim 1, wherein said at least one chemotherapeutic agent is selected from the group consisting of antiviral compounds, antibacterial compounds, anti-parasitic compounds, anti-cancer compounds and antibiotic compounds.

4. A composition as recited in claim 1, wherein said composition further comprises at least one compound selected from the group consisting of pharmaceutically acceptable additives, diluents, carriers, excipients and pharmaceutically acceptable salts of pharmaceutically acceptable additives, diluents, carriers and excipients.

5. A composition as recited in claim 1, wherein said composition is in the form of a pharmaceutical formulation.

6. A composition as claimed in claim 1, wherein said chemotherapeutic agent is selected from the group consisting of antimetabolites, nucleotide analogues and

nucleoside analogues.

7. A composition as claimed in claim 6, wherein said nucleotide analogues are pyrimidine antagonists.

8. A composition as claimed in claim 7, wherein said pyrimidine antagonists are selected from the group consisting of 5-fluorouracil; cytosine arabinoside, and azacitidine.

9. A composition as claimed in claim 6, wherein said nucleotide analogues are purine antagonists.

10. A composition as claimed in claim 9, wherein said purine antagonists are selected from the group consisting of: 6-mercaptopurine; azathioprine; 5-iodo-2'-deoxyuridine; 6-thioguanine; 2-deoxycoformycin, cladribine, cytarabine, fludarabine, mercaptopurine, thioguanine, and pentostatin.

11. A composition as claimed in claim 6, wherein said nucleoside analogues are selected from the group consisting of: purine and pyrimidine nucleosides; ara-nucleosides; amino-nucleosides; and aza-nucleosides.

12. A composition as claimed in claim 6, wherein said nucleoside analogues are selected from the group consisting of AZT (zidovudine); ACV; valacylovir; famiciclovir; acyclovir; cidofovir; penciclovir; ganciclovir; Ribavirin; ddC; ddI (zalcitabine); lamuvidine; Abacavir; Adefovir; Didanosine; gemcitabine; d4T (stavudine); 3TC; BW 1592; PMEA/bis-POM PMEA; ddT, HPMPC, HPMPG, HPMPA, PMEA, PMEG, dOTC; DAPD; Ara-AC, pentostatin; dihydro-5-azacytidine; tiazofurin; sangivamycin; Ara-A (vidarabine); 6-MMPR; 5-FUDR (floxuridine); cytarabine (Ara-C; cytosine arabinoside); 5-azacytidine (azacitidine); HBG [9-(4-hydroxybutyl)guanine], (1S,4R)-4-[2-amino-6-cyclopropyl-amino)-9H-purin-9-yl]-2-cyclopentene-1-methanol succinate ("159U89"), uridine; thymidine; idoxuridine; 3-deazauridine; cyclocytidine; dihydro-5-azacytidine; triciribine, ribavirin, and

fludrabine.

13. A composition as claimed in claim 6, wherein said nucleoside analogues are phosphate esters selected from the group consisting of: Acyclovir; 1-β-D-arabinofuranosyl-E-5-(2-bromovinyl)uracil; 2'-fluorocarbocyclic-2'-deoxyguanosine; 6'-fluorocarbocyclic-2'-deoxyguanosine; 1-(β-D-arabinofuranosyl)-5(E)-(2-iodovinyl)uracil; {(1r-1α, 2β, 3α)-2-amino-9-(2,3-bis(hydroxymethyl)cyclobutyl)-6H-purin-6-one} Lobucavir; 9H-purin-2-amine, 9-((2-(1-methylethoxy)-1-((1-methylethoxy)methyl)ethoxy)methyl)-(9CI); trifluorothymidine; 9-›(1,3-dihydroxy-2-propoxy)methylguanine (ganciclovir); 5-ethyl-2'-deoxyuridine; E-5-(2-bromovinyl)-2'-deoxyuridine; 5-(2-chloroethyl)-2'-deoxyuridine; buciclovir; 6-deoxyacyclovir; 9-(4-hydroxy-3-hydroxymethylbut-1-yl)guanine; E-5-(2-iodovinyl)-2'-deoxyuridine; 5-vinyl-1-β-D-arabinofuranosyluracil; 1-β-D-arabinofuranosylthymine; 2'-nor-2'deoxyguanosine; and 1-β-D-arabinofuranosyladenine.

14. A composition as claimed in claim 1, wherein said chemotherapeutic agent is selected from the group of compounds consisting of Chloroquin, primaquine, mefloquine, pyrimethamine-sulfadoxone, atoraquone/dapsone; halofantrine; artemisinin derivatives; atoraquone + proguanol, co-artemether; podophyllotoxin; pentamidine, diloxanide furoate, metronidazole, tindazole, tetracycline, quinacrine, stibogluconate, amphotericin B, quinine, doxycline, trimethoprim-sulfamethoxazole, metronidazole, nifurtimox, suramin, melarsoprol, benznidazole, metabolites of said compounds, salts of said compounds, derivatives of said compounds and any other anti-parasitic agent thereof.

15. A composition as claimed in claim 1, wherein said chemotherapeutic agent is selected from the group consisting of mitomycin C, nalidixic acid, puromycin, sanamycin, and actinomycin.

16. A composition as claimed in claim 1, wherein said chemotherapeutic agent is selected from the group consisting of N^6-(Δ^2-isopentyl) adenosine, N^6-(Δ^2-isopentyl) adenosine-5'-monophosphate, N^6-(Δ^2-isopentyl) adenosine-3',5'-cyclic

monophosphate, benzyladenosine, N^6- benzyladenosine-5'-monophosphate, N^6-benzyladenosine-3',5'-cyclic monophosphate, furfuryladenosine, N^6-furfuryladenosine -5'-monophosphate, N^6- furfuryladenosine -3',5'-cyclic monophosphate, N-(purin-6ylcarbamoyl)-o-chloroaniline ribonucleoside, N-(purin-6ylcarbamoyl)-o-chloroaniline ribonucleoside-5'-monophosphate, N^6-adamantyladenosine, N^6-adamantyladenosine-5'-monophosphate, N-(purin-6ylcarbamoyl)-o-octylamine ribonucleoside, N-(purin-6ylcarbamoyl)-o-octylamine ribonucleoside-5'-monophosphate, N-(purin-6ylcarbamoyl)-o-octylamine ribonucleoside-3',5'-cyclic monophosphate, N^6-(Δ^2-isopentyl)-2-methylthioadenosine, N^6-(4-hydroxy-3-methyl-trans-2-butenyl)adenosine, N^6-(3-chloro-trans-2-butenyl) adenosine, surfinal adenosine and preferred metabolites including N^6-(Δ^2-isopentyl) adenine, 6-N-(3-methyl-3-hydroxybutylamino) purine, adenine, hypoxanthine, uric acid, and methylated xanthines.

17. A composition as claimed in claim 1, wherein said at least one chemotherapeutic agent is gemcitabine.

18. A method of treating a patient suffering from neoplasia, comprising administering to said patient:

at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds; and

at least one chemotherapeutic agent.

19. A method as recited in claim 18, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

20. A method as recited in claim 18, wherein said at least one chemotherapeutic agent is selected from the group consisting of antiviral compounds, antibacterial compounds, anti-parasitic compounds, anti-cancer compounds and antibiotic compounds.

21. A method as recited in claim 18, wherein said chemotherapeutic agent is selected from the group consisting of antimetabolites, nucleotide analogues and nucleoside analogues.

22. A method as recited in claim 18, wherein said at least one chemotherapeutic agent is gemcitabine.

23. A method as claimed in claim 18, wherein said at least one compound is contained in a first composition, and said at least one chemotherapeutic agent is contained in a second composition.

24. A method as claimed in claim 23, wherein said first composition is administered to said patient, and later said second composition is administered to said patient.

25. A method as claimed in claim 23, wherein said second composition is administered to said patient, and later said first composition is administered to said patient.

26. A method as claimed in claim 23, wherein said first composition and said second composition are administered to said patient substantially simultaneously.

27. A method as claimed in claim 18, wherein said at least one compound and said at least one chemotherapeutic agent are contained in a single pharmaceutical formulation which is administered to said patient.

28. A method as claimed in claim 18, further comprising administering radiation treatment to said patient.

29. A method as claimed in claim 18, further comprising performing surgery on said patient.

30. A method as claimed in claim 18, wherein said neoplasia is selected from the group consisting of precancerous lesion including syndromes represented by abnormal neoplastic and/or dysplastic, changes of tissue comprising precancerous growths in colonic, breast, renal, central nervous, gastric, or lung tissues, or conditions such as dysplastic nevus syndrome, precursor to malignant melanoma of the skin, dysplastic nevus syndromes, polyposis syndromes, colonic polyps, precancerous lesions of the cervix (i.e., cervical dysplasia), prostatic dysplasia, bronchial dysplasia, breast, bladder and/or skin and related conditions (e.g., actinic keratosis), whether the lesions are clinically identifiable or not.

31. A method as claimed in claim 18, wherein said neoplasia is selected from the group consisting of prostate cancer, colon cancer, small cell lung cancer, large cell lung cancer, lung adenocarcinoma, epidermoid lung cancer, melanoma (including amelanotic subtypes), renal cell carcinoma, gastric carcinoma, cancers of the central nervous system including brain tumours, neuroblastomas, gastric carcinoma, breast cancer, ovarian cancer, testicular cancer, lymphoma and leukaemia, oesophageal cancer, stomach cancer, liver cancers, prostate cancer, cervical cancer, adrenal cancer, oral or mucosal cancer, bladder cancer, pancreatic cancer, lymphoma, Hodgkins disease, sarcomas, Haematopoietic cell cancers such as B cell leukaemia/lymphomas, myelomas, T-cell leukemias/lymphomas, small cell leukemias/lymphomas, null cell, sezary, monocytic, myelomonocytic and Hairy cell leukemias.

32. A method as claimed in claim 18, wherein said neoplasia is in the form of a tumour comprising an epidermoid and myeloid tumour, acute or chronic, nonsmall cell, squamous or solid.

33. A method as claimed in claim 18, wherein said at least one compound is micronized.

34. A method as claimed in claim 18, wherein said at least one compound and/or said chemotherapeutic agent is/are contained in a pharmaceutical formulation which has an enteric coating.

35. A method as claimed in claim 34, wherein each said enteric coating is made of a polymer or copolymer.

36. A method as claimed in claim 35, wherein said polymer or copolymer is selected from the group consisting of poly(lactic-glycolic acid) polyester, cellulose acetate phthalate, hydroxypropyl-methyl cellulose phthalate poly(butyl methacrylate), (2-dimethyl aminoethyl) methacrylate, and methyl methacrylate.

37. A method as claimed in claim 18, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered enterally, parenterally, topically, orally, sub-lingually, rectally, nasally or vaginally.

38. A method as claimed in claim 18, wherein said at least one compound and/or said chemotherapeutic agent is/are each contained in a liposome or a carbohydrate vehicle.

39. A method as claimed in claim 38, wherein said liposome or carbohydrate vehicle is specifically targeted to tumours by covalently attaching a monoclonal antibody directed to a tumour-associated antigen.

40. A method as claimed in claim 18, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered intermittently.

41. A method as claimed in claim 18, wherein said patient is a neonate and said administering is effected prior to delivery of said neonate and/or during delivery of said neonate.

42. A method as claimed in claim 18, wherein said at least one compound acts as a

prodrug.

43. A method as recited in claim 18, wherein said at least one compound is administered to said patient in an amount in the range of from 5 to 500 mg.

44. A method as recited in claim 18, wherein said patient is a mammal.

45. A method of treating a patient suffering from viral infection, comprising administering to said patient:

at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds; and

at least one chemotherapeutic agent.

46. A method as recited in claim 45, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

47. A method as recited in claim 45, wherein said at least one chemotherapeutic agent is selected from the group consisting of antiviral compounds, antibacterial compounds, anti-parasitic compounds, anti-cancer compounds and antibiotic compounds.

48. A method as recited in claim 45, wherein said chemotherapeutic agent is selected from the group consisting of antimetabolites, nucleotide analogues and nucleoside analogues.

49. A method as recited in claim 45, wherein said at least one chemotherapeutic agent is gemcitabine.

50. A method as claimed in claim 45, wherein said at least one compound is contained in a first composition, and said at least one chemotherapeutic agent is contained in a second composition.

51. A method as claimed in claim 50, wherein said first composition is administered to said patient, and later said second composition is administered to said patient.

52. A method as claimed in claim 50, wherein said second composition is administered to said patient, and later said first composition is administered to said patient.

53. A method as claimed in claim 50, wherein said first composition and said second composition are administered to said patient substantially simultaneously.

54. A method as claimed in claim 45, wherein said at least one compound and said at least one chemotherapeutic agent are contained in a single pharmaceutical formulation which is administered to said patient.

55. A method as claimed in claim 45, wherein said patient is a mammal.

56. A method as claimed in claim 45, wherein said viral infection is selected from the group consisting of DNA virus infections and RNA virus infections.

57. A method as claimed in claim 56, wherein said DNA virus infections and said RNA virus infections are selected from HIV, SHIV, SIV, FIV, HSV, CMV, HAV, HBV, HCV, HDV, HEV, EBV, BVDV, HSV-1, HSV-2, HSV-6, HHV-6, HHV-8, retrovirus infection, togavirus infection, flavivirus infection, rubivirus infection, pestivirus infection, lipid envelope virus infection, filovirus, picornavirus infection, rhinovirus infection, coronavirus infection, respiratory syncytial virus infection, poliovirus

infection, parainfluenza virus infection, influenza virus infection, hantavirus, adeno-associated virus, measles virus, poxvirus, filovirus, human papilloma virus and animal papilloma virus infection.

58. A method as claimed in claim 45, wherein said patient is suffering from one or more complications or co-infections associated with AIDS, AIDS related syndromes, including cachexia and/or wasting syndrome.

59. A method as claimed in claim 45, wherein said at least one compound and/or said chemotherapeutic agent is/are contained in a pharmaceutical formulation which has an enteric coating.

60. A method as claimed in claim 59, wherein said enteric coating is made of a polymer or copolymer.

61. A method as claimed in claim 60, wherein said polymer or copolymer is selected from the group consisting of poly(lactic-glycolic acid) polyester, cellulose acetate phthalate, hydroxypropyl-methyl cellulose phthalate poly(butyl methacrylate), (2-dimethyl aminoethyl) methacrylate, and methyl methacrylate.

62. A method as claimed in claim 45, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered enterally, parenterally, topically, orally, rectally, nasally or vaginally.

63. A method as claimed in claim 45, wherein said at least one compound and/or said chemotherapeutic agent is/are each contained in a liposome or a carbohydrate vehicle.

64. A method as claimed in claim 63, wherein each said liposome or carbohydrate vehicle is targeted to HIV infected cells by putting viral antibodies on a surface of said liposome or carbohydrate vehicle.

65. A method as claimed in claim 64, wherein said viral antibodies are directed to HIV coat protein gp160 and/or gp120.

66. A method as claimed in claim 45, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered intermittently.

67. A method as claimed in claim 45, wherein said patient is a neonate and said administering is effected prior to delivery of said neonate and/or during delivery of said neonate.

68. A method as claimed in claim 45, wherein said at least one compound acts as a prodrug.

69. A method of treating a patient suffering from parasite infection condition, comprising administering to said patient:

at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds; and

at least one chemotherapeutic agent.

70. A method as recited in claim 69, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

71. A method as recited in claim 69, wherein said at least one chemotherapeutic agent is selected from the group consisting of antiviral compounds, antibacterial compounds, anti-parasitic compounds, anti-cancer compounds and antibiotic

compounds.

72. A method as recited in claim 69, wherein said chemotherapeutic agent is selected from the group consisting of antimetabolites, nucleotide analogues and nucleoside analogues.

73. A method as recited in claim 69, wherein said at least one chemotherapeutic agent is gemcitabine.

74. A method as claimed in claim 69, wherein said at least one compound is contained in a first composition, and said at least one chemotherapeutic agent is contained in a second composition.

75. A method as claimed in claim 74, wherein said first composition is administered to said patient, and later said second composition is administered to said patient.

76. A method as claimed in claim 74, wherein said second composition is administered to said patient, and later said first composition is administered to said patient.

77. A method as claimed in claim 74, wherein said first composition and said second composition are administered to said patient substantially simultaneously.

78. A method as claimed in claim 69, wherein said at least one compound and said at least one chemotherapeutic agent are contained in a single pharmaceutical formulation which is administered to said patient.

79. A method as claimed in claim 69, wherein said patient is a mammal.

80. A method as claimed in claim 69, wherein said parasite infection is selected from the group consisting of *Trypanosoma, Plasmodium, Entamoeba, Balantidium, Leishmania, Pneumocystis, Trichomoniasis,* and *Toxoplasma.*

81. A method as claimed in claim 80, wherein said *Trypanosoma, Plasmodium, Entamoeba, Balantidium, Leishmania, Pneumocystis, Trichomoniasis,* and *Toxoplasma* are selected from the group consisting of *Trypanosoma cruzi, Trypanosoma brucei, Trypanosoma gambiense, Trypanosoma rhodesiense, Plasmodium falciparum, Plasmodium vivax, Plasmodium malariae, Plasmodium ovale, Plasmodium berghei, Entamoeba histolytica, Balantidium coli, Leishmania brazilienis, Leishmania mexicana, Leishmania donovani, Leishmania tropica, Pneumocystis carinii Trichomoniasis vaginalis,* and *Toxoplasma gondii* .

82. A method as claimed in claim 69, wherein said patient is suffering from a condition selected from the group consisting of malaria, sleeping sickness, African trypanosomiasis, Chagas disease, American trypanosomiasis, cryptosporidiosis, amebiasis, balantidiasis, giardiasis, leishmaniasis, pneumocystosis, trichomoniasis, and toxoplasmosis.

83. A method as claimed in claim 69, wherein said at least one compound and/or said chemotherapeutic agent is/are contained in a pharmaceutical formulation which has an enteric coating.

84. A method as claimed in claim 83, wherein each said enteric coating is made of a polymer or copolymer.

85. A method as claimed in claim 84, wherein said polymer or copolymer is selected from the group consisting of poly(lactic-glycolic acid) polyester, cellulose acetate phthalate, hydroxypropyl-methyl cellulose phthalate poly(butyl methacrylate), (2-dimethyl aminoethyl) methacrylate, and methyl methacrylate.

86. A method as claimed in claim 69, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered enterally, parenterally, topically, orally, rectally, nasally or vaginally.

87. A method as claimed in claim 69, wherein said at least one compound and/or

said chemotherapeutic agent is/are each contained in a liposome or a carbohydrate vehicle.

88. A method as claimed in claim 69, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered intermittently.

89. A method as claimed in claim 69, wherein said patient is a neonate and said administering is effected prior to delivery of said neonate and/or during delivery of said neonate.

90. A method as claimed in claim 69, wherein said at least one compound acts as a prodrug.

91. A method of treating a patient suffering from bacterial infection, comprising administering to said patient:

at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds; and

at least one chemotherapeutic agent.

92. A method as recited in claim 91, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

93. A method as recited in claim 91, wherein said at least one chemotherapeutic agent is selected from the group consisting of antiviral compounds, antibacterial compounds, anti-parasitic compounds, anti-cancer compounds and antibiotic

compounds.

94. A method as recited in claim 91, wherein said chemotherapeutic agent is selected from the group consisting of antimetabolites, nucleotide analogues and nucleoside analogues.

95. A method as recited in claim 91, wherein said at least one chemotherapeutic agent is gemcitabine.

96. A method as claimed in claim 91, wherein said at least one compound is contained in a first composition, and said at least one chemotherapeutic agent is contained in a second composition.

97. A method as claimed in claim 96, wherein said first composition is administered to said patient, and later said second composition is administered to said patient.

98. A method as claimed in claim 96, wherein said second composition is administered to said patient, and later said first composition is administered to said patient.

99. A method as claimed in claim 96, wherein said first composition and said second composition are administered to said patient substantially simultaneously.

100. A method as claimed in claim 91, wherein said at least one compound and said at least one chemotherapeutic agent are contained in a single pharmaceutical formulation which is administered to said patient.

101. A method as claimed in claim 91, wherein said patient is a mammal.

102. A method as claimed in claim 91, wherein said bacterial infection is an intracellular bacterial infection or an extracellular bacterial infection.

103. A method as claimed in claim 91, wherein said bacterial infection is selected from the group consisting of mycoplasma infection, *Listeria* infection or *Mycobacterium* infection; *Streptococcus* infection, *Staphylococcus* infection, *Vibrio* infection, *Salmonella* infection; *Shigella* infection, enterotoxigenic, enteropathogenic, enteroinvasive or enterohemorrhagic *E. coli* infection, *Yersinia* infection, *Campylobacter* infection, *Pseudomonas* infection, *Borrelia* infection, *Legionella* infection and *Haemophilus* infection; pulmonary *Aspergillosis*, mucosal or oropharyngealcandidiasis and juvenile paracoccidiomyosis; and any combinations thereof.

104. A method as claimed in claim 91, wherein said at least one compound and/or said chemotherapeutic agent is/are contained in a pharmaceutical formulation which has an enteric coating.

105. A method as claimed in claim 104, wherein said enteric coating is made of a polymer or copolymer.

106. A method as claimed in claim 105, wherein said polymer or copolymer is selected from the group consisting of poly(lactic-glycolic acid) polyester, cellulose acetate phthalate, hydroxypropyl-methyl cellulose phthalate poly(butyl methacrylate), (2-dimethyl aminoethyl) methacrylate, and methyl methacrylate.

107. A method as claimed in claim 91, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered enterally, parenterally, topically, orally, rectally, nasally or vaginally.

108. A method as claimed in claim 91, wherein said at least one compound and/or said chemotherapeutic agent is/are each contained in a liposome or a carbohydrate vehicle.

109. A method as claimed in claim 91, wherein said at least one compound and/or said chemotherapeutic agent is/are each administered intermittently.

110. A method as claimed in claim 91, wherein said patient is a neonate and said administering is effected prior to delivery of said neonate and/or during delivery of said neonate.

111. A method as claimed in claim 91, wherein said at least one compound acts as a prodrug.

112. A method of treating a patient for suppression of immune response rejection in tissue transplantation, comprising administering to said patient:

at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds; and

at least one chemotherapeutic agent.

113. A method as recited in claim 112, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

114. A method as recited in claim 112, wherein said at least one chemotherapeutic agent is selected from the group consisting of antiviral compounds, antibacterial compounds, anti-parasitic compounds, anti-cancer compounds and antibiotic compounds.

115. A method as recited in claim 112, wherein said chemotherapeutic agent is selected from the group consisting of antimetabolites, nucleotide analogues and nucleoside analogues.

116. A method as recited in claim 112, wherein said at least one chemotherapeutic agent is gemcitabine.

117. A method as claimed in claim 112, wherein said at least one compound is contained in a first composition, and said at least one chemotherapeutic agent is contained in a second composition.

118. A method as claimed in claim 117, wherein said first composition is administered to said patient, and later said second composition is administered to said patient.

119. A method as claimed in claim 117, wherein said second composition is administered to said patient, and later said first composition is administered to said patient.

120. A method as claimed in claim 117, wherein said first composition and said second composition are administered to said patient substantially simultaneously.

121. A method as claimed in claim 112, wherein said at least one compound and said at least one chemotherapeutic agent are contained in a single pharmaceutical formulation which is administered to said patient.

122. A method as claimed in claim 112, wherein said patient is a mammal.

123. A method as claimed in claim 112, wherein said at least one compound and/or said chemotherapeutic agent is/are contained in a pharmaceutical formulation which has an enteric coating.

124. A method as claimed in claim 123, wherein said enteric coating is made of a polymer or copolymer.

125. A method as claimed in claim 124, wherein said polymer or copolymer is

selected from the group consisting of poly(lactic-glycolic acid) polyester, cellulose acetate phthalate, hydroxypropyl-methyl cellulose phthalate poly(butyl methacrylate), (2-dimethyl aminoethyl) methacrylate, and methyl methacrylate.

126. A method as claimed in claim 112, wherein said at least one compound and/or said chemotherapeutic agent is/are administered enterally, parenterally, topically, orally, rectally, nasally or vaginally.

127. A method as claimed in claim 112, wherein at least one compound and/or said chemotherapeutic agent is/are contained in a liposome or a carbohydrate vehicle.

128. A method as claimed in claim 112, wherein said at least one compound and/or said chemotherapeutic agent is/are administered intermittently.

129. A method as claimed in claim 112, wherein said patient is a neonate and said administering is effected prior to delivery of said neonate and/or during delivery of said neonate.

130. A method as claimed in claim 112, wherein said at least one compound acts as a prodrug.

131. A method of endowing a chemotherapeutic agent with substantially enhanced therapeutic efficacy and reduced toxicity, comprising combining a chemotherapeutic agent with at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds,

thereby reducing the cytotoxicity of said chemotherapeutic agent in comparison to said chemotherapeutic agent alone.

132. A method as recited in claim 131, wherein said chemotherapeutic agent is gemcitabine.

133. A method as recited in claim 131, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

134. A method as recited in claim 132, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

135. A kit comprising:

unit dosages of at least one compound selected from the group of compounds consisting of: circiliol; 6-hydroxy-2,3,4-trimethoxy acetophenone; 2-(3,4-dibenzyloxybenzoyloxy)-4,5,6-trimethoxy acetophenone; 3'4'-dibenzyloxy-2-hydroxy-4,5,6-trimethoxydibenzoyl methane; 6,7-dibenzyloxy-5,6,7-trimethoxy flavone; 3,4-dihydroxy-5,6,7-trimethoxy flavone; 3,4-diacetoxy-5,6,7-trimethoxy flavone, derivatives of said compounds, metabolites of said compounds, analogues of said compounds and/or mimic molecules of said compounds, and

unit dosages of at least one chemotherapeutic agent.

136. A kit as recited in claim 135, wherein said at least one compound is selected from the group consisting of circiliol, precursor molecules of circiliol, derivatives of circiliol, metabolites of circiliol, analogues of circiliol and mimic molecules of circiliol.

137. A kit as recited in claim 135, wherein said at least one chemotherapeutic agent is selected from the group consisting of antiviral compounds, antibacterial compounds, anti-parasitic compounds, anti-cancer compounds and antibiotic compounds.

138. A kit as recited in claim 135, wherein said chemotherapeutic agent is selected from the group consisting of antimetabolites, nucleotide analogues and nucleoside analogues.

139. A kit as recited in claim 135, wherein said at least one chemotherapeutic agent is gemcitabine.